REMARKS

The issues outstanding in the in the Office Action mailed November 9, 2005, are the rejections under 35 U.S.C §§112 and 103, and the rejections under the doctrine of obviousness-type double patenting. Reconsideration of these issues, in view of the following discussion, is respectfully requested. At the outset, the Examiner is thanked for indicating the withdrawal of the rejections previously made, at page 2 of the Office Action.

Rejections Under 35 U.S.C §112

Claim 20 has been rejected under 35 U.S.C §112, first paragraph, as lacking written description for the recitation that the mixture does not contain chiral compounds. Reconsideration of this rejection is respectfully requested.

First, it is submitted that the first paragraph of 35 U.S.C §112 does not require, to satisfy written description, that the express language used in a claim be found in the specification. See *In re Wertheim et al.*, 541 F2d. 257, 191 U.S.P.Q. 90 (CCPA 1976). Instead, it is sufficient that a specification, when read by one of ordinary skill in the art, would inform the skilled artisan that the inventors *had possession* of subject matter later claimed. *Wertheim, supra.* For example, the Federal Circuit's predecessor court found to be supported a claim reciting a polymer "free of alkylatable groups," despite the absence of such language in the specification, where one of ordinary skill in the art would have recognized, based on the monomers used to produce the polymers in the patent, that the resultant polymers were free of alkylatable groups. *In re Smith*, 481 2d. 910, 178 U.S.P.Q. 620 (CCPA 1973). Such is the situation in the present application.

In the present application, one of ordinary skill in the art would clearly understand, from the disclosure, that no chiral compounds are present in the claimed mixtures. If the

presently claimed mixtures contained chiral components, the mixtures would lead to twisted films. However, the specification instead describes untwisted films, as evident from Figures 1a - 1c, and the description at pages 8 - 10, where films (11a,b) are disclosed with orientation axes (17a,b) crossed at an angle p which can vary from 0 to 90°. Such an embodiment would be nonsensical, if films 11a and/or 11b were twisted, since then orientation axes 17a,b could not be defined. Moreover, as noted at page 3 of the Office Action, the specification does not disclose chiral groups. See, for example, pages 26 and 30 where it is disclosed that R may be a branched group, but only achiral branched groups are listed. Moreover, the preferred monomers on page 32, and in the examples, do not include chiral compounds. Thus, the disclosure is internally consistent, and clearly teaches to one of ordinary skill in the art that, for the uses disclosed and characteristics disclosed for the materials of the invention, the absence of chiral compounds was contemplated by the inventors as a feature of their invention.

It is accordingly respectfully submitted that the specification fully supports the claim recitation of the absence of chiral compounds. Withdrawal of this rejection is respectfully requested.

Claims 1 - 19 have been rejected under 35 U.S.C §112, second paragraph. Reconsideration of this rejection is also respectfully requested.

It is argued, on page 3 of the Office Action, that the last two lines of claim 1 define the compound of Formula I having more than one polymerizable group twice within the same claim. Applicants respectfully disagree with this reading of the claim. Claim 1 recites a polymerizable mixture comprising (a1) 10 to 99% by weight of *at least one compound according to Formula I having one polymerizable functional group*, and, i.a., (a2) 5 to 70% of *at least one compound according to Formula I having two or more polymerizable*

functional groups. The claim then defines the "at least one compound of Formula I which has one polymerizable group" with a Formula I, and subsequently defines the "at least one compound which has two or more polymerizable groups of Formula I" with a *second* Formula I. It is noted that the definition of R in each of these formulae *differs*. The claim has been nominally clarified, in order to avoid confusion. It is submitted that the scope of the claim has not been changed by this clarification. It is further submitted that there is no duplication of definitions in the claim, and withdrawal of this rejection is respectfully requested.

With respect to claim 11, the definitions of the A moieties have been clarified. It is submitted that the amendments are clearly supported by the discussion of Formula II at page 6 of the specification and by the preferred definitions given at page 27. It is submitted that the scope of the claim is not changed by these amendments, but that the added clarity of the amendment renders the rejection moot. Withdrawal thereof is respectfully requested.

Rejections Under 35 U.S.C §§102 and 103

Claims 1, 3 - 9, 11 - 13 and 18 have been rejected under 35 U.S.C §102(b) and claims 1, 3 - 9, 11 - 13 and 18 - 20 have been rejected under 35 U.S.C §103, over Broer et al. '392. Reconsideration of this rejection is respectfully requested.

As will be recalled, Broer discloses polymerizable compounds containing mesogenic groups having *1 or 2* polymerizable groups. The Office Action argues, at page 4, that compositions "disclosed by Broer et al. wherein the weight percent of monofunctional compound (Formula 1) [*sic, I*] is from 10 - 99% and the weight percent of difunctional compound of Formula II or III is from 5 to 70% anticipate the instantly claimed mixtures." However, the Office Action does not point to the disclosure of any such mixture in Broer and,

it is submitted, no such disclosure exists in the patent. Indeed, as admitted at page 5 of the Office Action, "Broer et al. do not teach the specific weight percent limitations set forth in instant claims 1 or 10."

First, without more, the failure of the Broer patent to teach the weight percentages claimed, militates against a finding of anticipation. It is well established that, to constitute anticipation, all material elements of the claim must be found in a single prior art source, see *In re Marshall*, 577 F2d. 301, 198 U.S.P.Q. 344 (CCPA 1978). Instead, Broer solely discloses that the "temperature at which the orientation of the monomer, notably the mesogenic group, has to be carried out may be reduced by using a mixture of monomers in which not only the orientation takes place separately but can also take place in a comparatively low temperature, possibly at the ambient temperature. A further modification is the use of a mixture of polymer and a monomer in which the polymer may be constructed from other monomers than the monomer which is used here as a solvent." See column 4, lines 13 - 22. This disclosure falls far short of suggesting a specific mixture, much less in specified percentages, of a compound having one polymerizable group, and a compound having two or more polymerizable functional groups. As such, Broer clearly fails to anticipate the present claims, and it is submitted that the rejection should be withdrawn.

With respect to the portion of the rejection under 35 U.S.C §103, it is noted that Broer does not provide any guidance how to select the monomers for the stated mixture, nor a teaching that the monomers should comprise monomers with one polymerizable function group, *and* monomers with two polymerizable functional groups or more, much less in the stated percentages of the present claims. As noted above, the Office Action admits patentees fail to teach the weight percent limitations of the present claims. It is respectfully submitted that it would *not* have been obvious to select the weight percentages of the above-noted

groups, in the absence of patentees even teaching a mixture of compounds having one polymerizable group and compounds having two or more polymerizable groups. The mere disclosure of "mixtures" in the patent falls far short of suggesting the specifically claimed mixtures herein. Withdrawal of this rejection is therefore also respectfully requested.

Double Patenting

Claims 1 - 20 have been rejected under the doctrine of obviousness-type double patenting over claims 3 - 8 of U.S. Patent No. 5,750,051. Reconsideration of this rejection is respectfully requested. It is moreover noted that, based on the publication of corresponding application GB 2,229,333 on October 2, 1996, this disclosure may constitute a reference under various sections of 35 U.S.C §102. In any event, however, it is submitted that the reference fails to anticipate or suggest the present claims, inasmuch as the patent is directed to monofunctional reactive terphenyl compounds having a chiral terminal group. See, for example, Formula I and the claims. As such, the disclosure does not anticipate or suggest the present claims which do not contain chiral components.

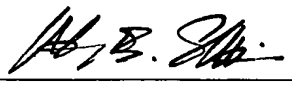
Claims 1 - 19 have also been rejected under the doctrine of obviousness-type double patenting over claims 1 - 8 of U.S. Patent No. 6,316,066. Reconsideration of this rejection is also respectfully requested, in view of the accompanying Terminal Disclaimer.

Finally, claims 1 - 19 have been rejected under the doctrine of obviousness-type double patenting over claims 15 - 19 of U.S. Patent No. 6,010,643. Reconsideration of this rejection is also respectfully requested. As noted at page 6 of the Office Action, the '643 patent requires a chiral polymerizable compound of Formula I. It is noted that former claim 20 of the present application was not rejected over this reference. Accordingly, it is submitted that this issue is moot.

The claims of the application are accordingly submitted to be in condition for allowance. However, if the Examiner has any questions or comments, she is cordially invited to telephone the undersigned at the number below.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



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